#9

STN/East Search Strategy

(FILE 'HOME' ENTERED AT 09:45:06 ON 25 OCT 2001)

FILE 'MEDLINE, CAPLUS, BIOSIS, AGRICOLA' ENTERED AT 09:45:32 ON 25 OCT 2001

L1 25 S STREPTOGRAMIN (3N) A (3N) ACETYLTRANSFERASE
L2 1 S L1 AND VATD
L3 15 DUP REM L1 (10 DUPLICATES REMOVED)

FILE 'MEDLINE, CAPLUS, BIOSIS, AGRICOLA' ENTERED AT 10:11:39 ON 25 OCT 2001

L4 274 S SATA
L5 28 S L4 AND ACETYLTRANSFERASE
L6 19 DUP REM L5 (9 DUPLICATES REMOVED)
L7 16 S L6 AND STREPTOGRAMIN

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
1	BRS	L1	1	vatd	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/10/25 10:15	
2	BRS	L8	2857	sata	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/10/25 10:15	
3	BRS	L15	3	l8 and acetyltransferase	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/10/25 10:16	
4	BRS	L22	9	acetyltransferase and streptogramin	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/10/25 10:17	

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
5	BRS	L29	0	l22 and vat	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/10/25 10:17	

3 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2001 ACS
AN 2001:101325 CAPLUS
DN 134:158502
TI A vatD gene from Enterococcus faecium encoding an **acetyltransferase** inactivating **streptogramin**, and **a** method for screening of active antibiotics
IN Haroche, Julien; Allignet, Jeanine; El, Solh Nevine
PA Institut Pasteur, Fr.; El Solh, Nevine
SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001009344	A1	20010208	WO 2000-IB1108	20000728

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1999-146141 P 19990730
AB A gene encoding an **acetyltransferase** inactivating **streptogramin A** was isolated from an Enterococcus faecium strain and sequenced. The gene, designated vatD, encodes a 23,775 kDa protein exhibiting 48.5 to 59.9 % amino acid identity with four other enzymes with the same activity, Vat, VatB, VatC and SatA. A method for detecting a bacterium that is resistant to a streptogramin and harbors gene vatD is provided. Also provided a method of screening an active antibiotic for treating a Gram-pos. bacterial infection.
RE.CNT 4
RE
(1) Aroche, J; ANTIMICROBIAL AGENTS AND CHEMOTHERAPY 2000, V44(1), P190
(2) Bergeron, M; WO 9608582 A 1996 CAPLUS
(3) Institut Pasteur Fr; WO 9859058 A 1998 CAPLUS
(4) Werner, G; ANTIMICROBIAL AGENTS AND CHEMOTHERAPY 1999, V43(7), P1813
CAPLUS

L3 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2001 ACS
AN 2001:64597 CAPLUS
DN 135:148057
TI Identification of vat(E-3), a novel gene encoding resistance to quinupristin-dalfopristin in a strain of Enterococcus faecium from a hospital patient in the United Kingdom
AU Soltani, Mehnam; Beighton, David; Philpott-Howard, John; Woodford, Neil
CS Joint Microbiology Research Unit, Guys, King's and St. Thomas' Dental Institute, London, SE5 9RW, UK
SO Antimicrob. Agents Chemother. (2001), 45(2), 645-646
CODEN: AMACCQ; ISSN: 0066-4804
PB American Society for Microbiology
DT Journal
LA English
AB The antibiotic virginiamycin has been given to animals in the United States and Europe for prodn. purposes, although its use was recently banned. Enterococcus faecium strains that are resistant to the antibiotic

virginiamycin have been isolated from exposed animals, raw meat, and hospital patients. These E. faecium strains are also resistant to the related antibiotic quinupristin-dalfopristin. Quinupristin-dalfopristin, which is a mixt. of semisynthetic streptogramins A and B, is licensed for clin. use. Resistance to streptogramin A mediated by Enterococcus faecium plasmid genes vat(D) or vat(E) is required for resistance to quinupristin-dalfopristin and virginiamycin. The authors used PCR to isolate and sequence vat(E) genes from quinupristin-dalfopristin-resistant animals, raw meat, and hospital patients in the United Kingdom. The DNA sequence of one isolate from a hospital patient, named E. faecium A41, had 20 nucleotide changes resulting in 5 previously undescribed amino acid changes and is designated the vat(E-3) allele. The previously described vat(E-1) allele was detected in E. faecium strains from nonhuman sources and in three out of four clin. isolates.

RE.CNT 6

RE

(1) Hammerum, A; FEMS Microbiol Lett 1998, V168, P145 CAPLUS
(2) Haroche, J; Antimicrob Agents Chemother 2000, V44, P190 CAPLUS
(4) Rende-Fournier, R; Antimicrob Agents Chemother 1993, V37, P2119 CAPLUS
(5) Soltani, M; Antimicrob Agents Chemother 2000, V44, P433 CAPLUS
(6) Werner, G; Microb Drug Resist 2000, V6, P37 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 15 MEDLINE DUPLICATE 1

AN 2000187148 MEDLINE

DN 20187148 PubMed ID: 10722489

TI Identification of **a streptogramin A acetyltransferase** gene in the chromosome of Yersinia enterocolitica.

AU Seoane A; Garcia Lobo J M

CS Departamento de Biologia Molecular, Unidad Asociada al Centro de Investigaciones Biologicas, CSIC, Facultad de Medicina, Universidad de Cantabria, Santander, Spain.

SO ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, (2000 Apr) 44 (4) 905-9. Journal code: 6HK; 0315061. ISSN: 0066-4804.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

OS GENBANK-AF170730

EM 200005

ED Entered STN: 20000512
Last Updated on STN: 20000512
Entered Medline: 20000501

AB Streptogramins are polypeptide antibiotics inhibiting protein synthesis by the prokaryotic ribosome. Gram-positive organisms are susceptible to streptogramins, while most gram-negative bacteria are intrinsically resistant. We have found a genomic fragment from a Yersinia enterocolitica isolate with an open reading frame coding for a polypeptide similar to the virginiamycin acetyltransferases found in various plasmids from gram-positive bacteria. The susceptible Escherichia coli strain DB10 was transformed to resistance to the type A streptogramins and to mixed (A + B) streptogramins upon introduction of a plasmid containing that gene. In addition, we showed streptogramin acetylating activity in vitro dependent

on the presence of the Y. enterocolitica sat gene. Southern blot hybridization experiments showed that the sat gene was present in all the Y. enterocolitica isolates examined. These data together show that the gene in the Y. enterocolitica chromosome encoded an active streptogramin acetyltransferase. The deduced sequence of the Y. enterocolitica Sat protein was close to those of sat gene products found in gram-positive bacteria and cyanobacteria, suggesting a common evolutionary origin.

L3 ANSWER 4 OF 15 MEDLINE DUPLICATE 2
AN 2000410786 MEDLINE
DN 20235660 PubMed ID: 10771435
TI Expression, purification and crystallization of enterococcus faecium **streptogramin A acetyltransferase**.
AU Sugantino M; Roderick S L
CS Department of Biochemistry, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, New York 10461, USA.
NC AI38328 (NIAID)
AI42154 (NIAID)
SO ACTA CRYSTALLOGRAPHICA. SECTION D: BIOLOGICAL CRYSTALLOGRAPHY, (2000 May) 56 (Pt 5) 640-2.
Journal code: C3C; 9305878. ISSN: 0907-4449.
CY Denmark
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS SWISSPROT-P50870
EM 200008
ED Entered STN: 20000907
Last Updated on STN: 20000907
Entered Medline: 20000829
AB The **streptogramin A acetyltransferase** from Enterococcus faecium (SWISS-PROT P50870) has been overexpressed in Escherichia coli, purified and crystallized. Crystallization conditions were screened using the hanging-drop vapor-diffusion method and resulted in two distinct crystal forms. Form I crystals diffract to 2.5 A and belong to space group P2(1)2(1)2(1), with unit-cell parameters a = 68.6, b
= 102.6, c = 107.5 A. Form II crystals diffract to 2.7 A and belong to space group F222, with unit-cell parameters a = 185.8, b = 185.8, c = 186.5 A. Rotation-function and packing analyses for both crystal forms indicate that the asymmetric unit may contain one and two copies of the trimeric enzyme for crystal forms I and II, respectively.

L3 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2001 ACS
AN 2001:5921 CAPLUS
DN 135:222256
TI Linkage of determinants for streptogramin A, macrolide-lincosamide-streptogramin B, and chloramphenicol resistance on a conjugative plasmid in Enterococcus faecium and dissemination of this cluster among streptogramin-resistant enterococci
AU Werner, Guido; Hildebrandt, Bianca; Klare, Ingo; Witte, Wolfgang
CS Wernigerode Branch, Robert Koch Institute, Wernigerode, D-38855, Germany
SO Int. J. Med. Microbiol. (2000), 290(6), 543-548
CODEN: IMEMFV; ISSN: 1438-4221
PB Urban & Fischer Verlag
DT Journal
LA English
AB A new streptogramin A resistance gene, satG (= vatE), has been recently identified in Enterococcus faecium UW1965 (Werner and Witte 1999. Antimicrob. Agents Chemother. 43: 1813-1814). Further sequence anal. of

this plasmid revealed that vatE is in a cluster together with other resistance genes. The identified ORFs were nearly identical with the already known genes ermB and cat. The ermB fragment exhibited more than 99% identity with a resistance region from the streptococcal plasmid pIP501, whereas the cat fragment also contained a truncated rep gene homolog with more than 99% identity to sequences in small staphylococcal plasmids. The cat-rep and the ermB-vatE segments were linked by an IS1216V insertion sequence widely distributed among enterococci. PCR anal. of addnl. 76 streptogramin-resistant isolates possessing vatE and ermB revealed a linkage of both genes in 45 isolates (59%); 15 of them with a gene arrangement, cat-repU-IS1216V-ermB-vatE, identical to the ref.
strain UW1965. An identical linkage of IS1216V-ermB-vatE was found among isolates from poultry manure, poultry meat, stool samples of humans, and hospital patients indicating a possible spread of the resistance gene cluster via the food chain to humans.
RE.CNT 33
RE
(1) Allignet, J; Antimicrob Agents Chemother 1995, V39, P2027 CAPLUS
(2) Allignet, J; Antimicrob Agents Chemother 1998, V42, P1794 CAPLUS
(3) Allignet, J; Gene 1992, V117, P45 CAPLUS
(4) Allignet, J; Gene 1993, V130, P91 CAPLUS
(5) Allignet, J; Gene 1997, V202, P133 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2001 ACS
AN 2000:69551 CAPLUS
DN 132:205342
TI Mechanisms of resistance to quinupristin-dalfopristin among isolates of Enterococcus faecium from animals, raw meat, and hospital patients in Western Europe
AU Soltani, Mehnam; Beighton, David; Philpott-Howard, John; Woodford, Neil
CS Antibiotic Resistance Monitoring and Reference Laboratory, Central Public Health Laboratory, London, NW9 5HT, UK
SO Antimicrob. Agents Chemother. (2000), 44(2), 433-436
CODEN: AMACCQ; ISSN: 0066-4804
PB American Society for Microbiology
DT Journal
LA English
AB Twenty-eight quinupristin-dalfopristin-resistant isolates of Enterococcus faecium from hospital patients and nonhuman sources in European countries were studied. High-level resistance (MICs, .gtoreq.32 .mu.g/mL) was assocd. with the presence of vat(E) (satG) (14 isolates [50%]) or vat(D) (satA) (6 isolates [21%]). These genes were not detected in eight (29%) isolates with lower levels of quinupristin-dalfopristin resistance (MICs, 4 to 16 .mu.g/mL). This suggests the presence of further mechanisms of resistance to quinupristin-dalfopristin in E. faecium.
RE.CNT 23
RE
(1) Allignet, J; Antimicrob Agents Chemother 1995, V39, P2027 CAPLUS
(2) Allignet, J; Antimicrob Agents Chemother 1996, V40, P2523 CAPLUS
(3) Allignet, J; Antimicrob Agents Chemother 1998, V42, P1794 CAPLUS
(4) Allignet, J; Gene 1992, V117, P45 CAPLUS
(5) Allignet, J; Gene 1993, V130, P91 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2001 ACS
AN 2000:11466 CAPLUS
DN 132:161909
TI satG, conferring resistance to streptogramin A, is widely distributed in

Enterococcus faecium strains but not in staphylococci
AU Haroche, Julien; Allignet, Jeanine; Aubert, Sylvie; Van Den Bogaard, Anthony E.; El Solh, Nevine
CS National Reference Center for Staphylococci, Unite des Staphylocoques, Institut Pasteur, Paris, 75724, Fr.
SO Antimicrob. Agents Chemother. (2000), 44(1), 190-191
CODEN: AMACCQ; ISSN: 0066-4804
PB American Society for Microbiology
DT Journal
LA English
AB A gene almost identical to satG was isolated from an Enterococcus faecium strain. This gene was transferred to a Staphylococcus aureus recipient strain where it conferred resistance to streptogramin A. SatG was found to be widely distributed among E. faecium strains but not detected among staphylococci.
RE.CNT 22
RE
(1) Aarestrup, F; APMIS 1998, V106, P606 CAPLUS
(2) Allignet, J; Antimicrob Agents Chemother 1995, V39, P2027 CAPLUS
(3) Allignet, J; Antimicrob Agents Chemother 1996, V40, P2523 CAPLUS
(4) Allignet, J; Antimicrob Agents Chemother 1998, V42, P1794 CAPLUS
(5) Allignet, J; Gene 1992, V117, P45 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 15 MEDLINE
AN 1999364286 MEDLINE
DN 99364286 PubMed ID: 10438336
TI Characterization of a new enterococcal gene, satG, encoding a putative **acetyltransferase** conferring resistance to **Streptogramin A** compounds.
AU Werner G; Witte W
SO ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, (1999 Jul) 43 (7) 1813-4.
Journal code: 6HK; 0315061. ISSN: 0066-4804.
CY United States
DT Letter
LA English
FS Priority Journals
OS GENBANK-AF139725
EM 199908
ED Entered STN: 19990816
Last Updated on STN: 19990816
Entered Medline: 19990805

L3 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2001 ACS
AN 1999:434756 CAPLUS
DN 131:195157
TI Characterization of a new enterococcal gene, satG, encoding a putative **acetyltransferase** conferring resistance to **streptogramin A** compounds
AU Werner, G.; Witte, W.
CS Robert Koch Institute Wernigerode Branch, Wernigerode, D-38855, Germany
SO Antimicrob. Agents Chemother. (1999), 43(7), 1813-1814
CODEN: AMACCQ; ISSN: 0066-4804
PB American Society for Microbiology
DT Journal
LA English
AB A quinupristin-dalfopristin-resistant Enterococcus faecium was isolated from a sewage treatment plant in Germany. PCR primers, based on conserved
motifs in the vat, satA and vatB genes, were prepd. and found to produce

144-147-bp fragments from these 3 genes. Use of these primers with the antibiotic-resistant E. faecium produced a 150-bp fragment. This fragment was used as a probe to identify and clone the corresponding gene, called satG. There was significant homol. between the amino acid sequence of the encoded protein and streptogramin acetyltransferases. Based on the satG sequence, two primers specific for the satG gene were prepd. Preliminary results of a search for streptogramin-resistant enterococci revealed the existence of the satG gene in 9 or 23 isolated from sewage, 6 of 24 isolated from broiler samples, and all 17 isolates from poultry manure. Of 62 quinupristin-dalfopristin-resistant E. faecium isolates from hospitals in Germany, 9 were pos. for satG. The high no. of satG isolates from poultry meat and manure may be due to selection of these bacteria by use of virginiamycin as a feed additive, and spread of the resistance via the food chain to humans is very likely. This hypothesis is being investigated.

RE.CNT 11

RE

(1) Allignet, J; Antimicrob Agents Chemother 1995, V39, P2027 CAPLUS
(2) Allignet, J; Antimicrob Agents Chemother 1998, V42, P1794 CAPLUS
(3) Allignet, J; Gene 1992, V117, P45 CAPLUS
(4) Allignet, J; Gene 1993, V130, P91 CAPLUS
(5) Allignet, J; Gene 1997, V202, P133 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2001 ACS

AN 1999:27947 CAPLUS

DN 130:92750

TI Staphylococcal genes and proteins and their use for detecting resistance to streptogramin A or to streptogramin B

IN El Solh, Nevine; Allignet, Jeanine

PA Institut Pasteur, Fr.

SO PCT Int. Appl., 64 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9859058	A2	19981230	WO 1998-IB962	19980622
	WO 9859058	A3	19990415		
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9877838	A1	19990104	AU 1998-77838	19980622
	EP 994951	A1	20000426	EP 1998-925874	19980622
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1997-50380	P	19970620		
	WO 1998-IB962	W	19980622		

AB The present invention pertains to polynucleotides derived from staphylococcal genes encoding resistance to streptogramin A or to streptogramin B and chem. related compds. This invention also relates to

the use of the polynucleotides as oligonucleotide primers or probes for detecting Staphylococcal strains that are resistant to streptogramin A or to streptogramin B and related compds. in a biol. sample. In another embodiment, the present invention is directed to the full-length coding sequences of the staphylococcal genes encoding for resistance to streptogramin A or to streptogramin B from Staphylococcus and to the polypeptides expressed by these full length coding sequences. Gene vgaB encoding an ATP motif-contg. protein for resistance to streptogramin A was isolated from Staphylococcus aureus, and genes vgbB (encoding a lactonase for streptogramin B) and vatC (encoding an **acetyltransferase** for **streptogramin A**) were isolated from S. cohnii. Further, this invention relates to the use of the expressed polypeptides to produce specific monoclonal or polyclonal antibodies that serve as detection means in order to characterize any staphylococcal strain carrying genes encoding resistance to streptogramin A or to streptogramin B.

L3 ANSWER 11 OF 15 MEDLINE DUPLICATE 3
AN 1998325453 MEDLINE
DN 98325453 PubMed ID: 9661023
TI Characterization of a staphylococcal plasmid related to pUB110 and carrying two novel genes, vatC and vgbB, encoding resistance to streptogramins A and B and similar antibiotics.
AU Allignet J; Liassine N; el Solh N
CS National Reference Center for Staphylococci, Unite des Staphylocoques, Institut Pasteur, Paris, France.
SO ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, (1998 Jul) 42 (7) 1794-8.
Journal code: 6HK; 0315061. ISSN: 0066-4804.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-AF015628
EM 199810
ED Entered STN: 19981020
Last Updated on STN: 19981020
Entered Medline: 19981008
AB We isolated and sequenced a plasmid, named pIP1714 (4,978 bp), which specifies resistance to streptogramins A and B and the mixture of these compounds. pIP1714 was isolated from a Staphylococcus cohnii subsp. cohnii strain found in the environment of a hospital where pristinamycin was extensively used. Resistance to both compounds and related antibiotics is encoded by two novel, probably cotranscribed genes, (i) vatC, encoding a 212-amino-acid (aa) **acetyltransferase** that inactivates **streptogramin A** and that exhibits 58.2 to 69.8% aa identity with the Vat, VatB, and SatA proteins, and (ii) vgbB, encoding a 295-aa lactonase that inactivates streptogramin B and that shows 67% aa identity with the Vgb lactonase. pIP1714 includes a 2,985-bp fragment also found in two rolling-circle replication and mobilizable plasmids, pUB110 and pBC16, from gram-positive bacteria. In all three plasmids, the common fragment was delimited by two direct repeats of four nucleotides (GGGC) and included (i) putative genes closely related to repB, which encodes a replication protein, and to pre(mob), which encodes a protein required for conjugative mobilization and site-specific recombination, and (ii)

sequences very similar to the double- and single-strand origins (dso, ssoU) and the recombination site, RSA. The antibiotic resistance genes repB and pre(mob) carried by each of these plasmids were found in the same transcriptional orientation.

L3 ANSWER 12 OF 15 MEDLINE DUPLICATE 4
AN 96050737 MEDLINE
DN 96050737 PubMed ID: 8540711
TI Diversity among the gram-positive **acetyltransferases** inactivating **streptogramin A** and structurally related compounds and characterization of a new staphylococcal determinant, vatB.
AU Allignet J; el Solh N
CS National Reference Center for Staphylococci, Institut Pasteur, Paris, France.
SO ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, (1995 Sep) 39 (9) 2027-36.
Journal code: 6HK; 0315061. ISSN: 0066-4804.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-L38809
EM 199602
ED Entered STN: 19960221
Last Updated on STN: 19960221
Entered Medline: 19960206
AB A gene encoding an **acetyltransferase** inactivating **streptogramin A** (SgA) and structurally similar compounds was isolated from a staphylococcal plasmid and sequenced. This gene, designated vatB, potentially encodes a 212-amino-acid protein, VatB, of 23,320 Da with 47.4 and 58.4% amino acid identities with two other enzymes with the same activity, Vat and SatA, respectively, which are encoded by a staphylococcal plasmid and an enterococcal plasmid, respectively. The C-terminal parts of these three enzymes share significant homology with the C-terminal parts of 10 other acetyltransferases modifying various substrates. A pair of degenerate primers representing the conserved motifs shared by VatB, Vat, and SatA was designed to detect the three genes encoding these SgA acetyltransferases. Five of 12 clinical SgAr Staphylococcus aureus isolates tested carried neither these genes nor the gene vga, which confers resistance to SgA by a different mechanism, suggesting that another gene(s) and possibly another mechanism of resistance to SgA in staphylococci remains to be characterized.

L3 ANSWER 13 OF 15 MEDLINE DUPLICATE 5
AN 94079356 MEDLINE
DN 94079356 PubMed ID: 8257133
TI Identification of the satA gene encoding **a streptogramin A acetyltransferase** in Enterococcus faecium BM4145.
AU Rende-Fournier R; Leclercq R; Galimand M; Duval J; Courvalin P
CS Unite des Agents Antibacteriens, Institut Pasteur, Paris, France.
SO ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, (1993 Oct) 37 (10) 2119-25.
Journal code: 6HK; 0315061. ISSN: 0066-4804.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals

OS GENBANK-L05008; GENBANK-L05009; GENBANK-L05010; GENBANK-L05011; GENBANK-L05012; GENBANK-L05013; GENBANK-L05014; GENBANK-L08748; GENBANK-L12033; GENBANK-M97169
EM 199401
ED Entered STN: 19940203
Last Updated on STN: 19990129
Entered Medline: 19940113
AB Enterococcus faecium BM4145, a clinical isolate from urine, was resistant to streptogramin group A antibiotics by inactivation. The strain harbored a plasmid containing a gene, satA, responsible for this resistance; this gene was cloned and sequenced. It encoded SatA, a protein deduced to be 23,634 Da in mass and homologous with a new family of chloramphenicol acetyltransferases described in Agrobacterium tumefaciens, Escherichia coli, Pseudomonas aeruginosa, and Staphylococcus aureus. The similarity of SatA to other acetyltransferases, LacA (thiogalactoside acetyltransferase) and CysE (serine acetyltransferase) from E. coli, and to two putative acetyltransferases, NodL from Rhizobium leguminosarum and Urf1 from E. coli, was also observed in a region considered to be the enzyme's active site. Acetylation experiments indicated that acetyl coenzyme A was necessary for SatA activity and that a single acetylated derivative of pristinamycin IIA was produced. Other members of the streptogramin A group such as virginiamycin M and RP54476 were also substrates for the enzyme. We conclude that resistance to the streptogramin A group of antibiotics in E. faecium BM4145 is due to acetylation by an enzyme related to the novel chloramphenicol acetyltransferase family.

L3 ANSWER 14 OF 15 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1994:426230 BIOSIS
DN PREV199497439230
TI Sequence of a staphylococcal gene, vat, encoding an **acetyltransferase** inactivating **streptogramin A** and related antibiotics (RP54476.
AU Allignet, J.; Loncle, V.; El Solh, N.
CS Institut Pasteur, Paris France
SO Program and Abstracts of the Interscience Conference on Antimicrobial Agents and Chemotherapy, (1993) Vol. 33, No. 0, pp. 159.
Meeting Info.: 33rd Interscience Conference on Antimicrobial Agents and Chemotherapy New Orleans, Louisiana, USA October 17-20, 1993
ISSN: 0733-6373.
DT Conference
LA English

L3 ANSWER 15 OF 15 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1992:451989 BIOSIS
DN BA94:93389
TI ACTIVITY OF RP 59500 A NEW PARENTERAL SEMISYNTHETIC STREPTOGRAMIN AGAINST STAPHYLOCOCCI WITH VARIOUS MECHANISMS OF RESISTANCE TO MACROLIDE LINCOSAMIDE STREPTOGRAMIN ANTIBIOTICS.
AU LECLERCQ R; NANTAS L; SOUSSY C-J; DUVAL J
CS SERV. DE BACTERIOL.-VIROL.-HYGIENE, HOPITAL HENRI MONDOR, UNIV. PARIS XII, 51, AVENUE MARECHAL DE LATTRE DE TASSIGNY, 94010 CRETEIL, FR.
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AB RP 59500 is a semisynthetic streptogramin (Sg) composed of two synergic components: RP 57669 and RP 54476. The activities of RP 59500, RP 57669 and RP 54476 were tested against 20 strains of staphylococci susceptible to macrolide, lincosamide and streptogramin antibiotics (MLS) and against strains exhibiting different MLS resistance mechanisms. RP 59500 was active against 14 strains harbouring emrA or ermC genes which were inducibly or constitutively resistant to erythromycin (MICs of 0.5-2 mg/L). Neither RP 59500, RP 57669 nor RP 54476 induced MLSB resistance. Constitutive mutants appeared at frequencies of 10-7-10-8 when two MLSB-inducible strains of staphylococci were exposed to 40 mg/L each of clindamcyin and RP 57669. No such mutants appeared on plates containing

RP

59500 or RP 54476. The emergence of mutants was prevented if the cultures were exposed to RP 54476 (50 mg/L), indicating that such mutants are unlikely to be selected in vivo by RP 59500. However, for some constitutive mutants, MBCs of RP 59500 were as high as 8 mg/L. Strains producing acetyltransferase and hydrolase, inactivating SgA- and SgB-type antibiotics respectively, were resistant to RP 59500, RP 57669 and RP 54476. Production of Pincosamide nucleotidyltransferase-4, which inactivates lincosamides, had no effect on the MICs of RP 59500, RP 57669 and RP 54479.